Task

 Write Java code for endpoints of an existing REST API using Spring Boot

Description

There's an existing REST API for CRUD operations.

Data should be put/retrieved in/from a PostgreSQL table (data model available).

Make it possible to run in Docker.

Unit and integration tests required as well as documenting and versioning of this API (Swagger).

In your code use Google Java Style Guides.

Task Fulfillment is verified by using any REST client (such as Postman) and retrieving each of endpoints with needed parameters and receiving expecting results (as in REST API).

Data Model is available

REST API is available

Tech Stack To Be Used

Java 1.8

Spring Boot (not Spring MVC)

Hibernate

Gradle 3.3+

PostgreSQL 9.5+ (DB model see in Additional Info)

Junit, Mockito, PowerMock

Docker (see template in Additional Info)

Swagger

Tests

For integration tests use SpringBootTest annotation and SpringRunner. Place these tests in integrationTest source set (define additional source set in build.gradle). Call rest endpoints with TestRestTemplate.

For unit tests mock repository implementation with Mockito. Do not directly inject JPA or CRUD repository into controllers, but use Spring service instead.

Code convention

Besides using Google Java Style Guides see the project template in Additional Info section.

REST API description

The following endpoints should be implemented:

/v1/fares/route/{route_id} - GET - get all active fares for the route (where fare.active = 1)
Response:
```
[
 {
   "zone_id": 1,
   "tariff_id": 1,
   "amount": 10000,
   "start_date": "2016-02-01T00:00:00Z",
   "create_user_id": 1,
   "active": true
 }
]
```
Response Code:
200 OK

/v1/fares/ - POST - create new fare
Request
```
{
 "zone_id": 1,
 "tariff_id": 1,
 "amount": 10000,
 "start_date": "2016-02-01T00:00:00Z",
 "create_user_id": 1
}
```
Response
```
{
 "id": 1,
 "zone_id": 1,
 "tariff_id": 1,
 "amount": 10000,
 "start_date": "2016-02-01T00:00:00Z",
 "create_user_id": 1,
 "active": true
}
```

Response Code
201 CREATED

/v1/fares/{fare_id} - GET - get fare data

Response
```
{
  "id": 1,
  "zone_id": 1,
  "tariff_id": 1,
  "amount": 10000,
  "start_date": "2016-02-01T00:00:00Z",
  "create_user_id": 1,
  "active": true
}
```

Response Code
200 OK

/v1/fares/{fare_id} - PUT - update fare data

Request
```
{
  "id": 1,
  "zone_id": 1,
  "tariff_id": 1,
  "amount": 20000,
  "start_date": "2016-02-02T00:00:00Z",
  "create_user_id": 1
}
```

Response code
204 NO CONTENT

Deliverables

Use project template provided In Additional info as a starting point (feel free to add any required dependencies, libraries, plugins, artifacts, etc). The result must correspond to the original project structure and implement endpoints and operations described in REST API description. Your code will be carefully reviewed (code style, logic, unit and integration tests) before final approval.

Additional Info

Project template: https://www.dropbox.com/sh/5pb3d41190ecyfo/AAAc6v5viXIE3JBsCKy5FYwHa?dl=0

Data Model in a MySQL Workbench file (but DB should be PostgreSQL):
https://www.dropbox.com/s/od50332d5i6sna9/Fare_Microservice_Model.mwb?dl=0

Data Model EER Diagram

fares
🔑 id INT
◇ zone_id INT
◇ tariff_id INT
◇ amount INT
◇ start_date DATETIME
◇ created_at DATETIME
◇ updated_at DATETIME
◇ create_user_id INT
◇ update_user_id INT
◇ active BOOLEAN
Indexes
PRIMARY